

**REMARKS**

Claims 17-30 are pending in this application. By this Amendment, claims 17, 18, 20-23, 26, 27 and 30 are amended. Claim 16 is canceled without prejudice to or disclaimer of the subject matter of that claim. No new matter is added by these amendments.

Reconsideration of the application in view of the above amendments and the following remarks is respectfully requested.

Entry of the amendments is proper under 37 CFR §1.116 because the amendments: (a) place the application in condition for allowance for the reasons discussed herein; (b) do not raise any new issue requiring further search and/or consideration as the amendments amplify issues previously discussed throughout prosecution; and (c) place the application in better form for appeal, should an appeal be necessary. The amendments are necessary and were not earlier presented because they are made in response to arguments raised in the final rejection. Entry of the amendments is thus respectfully requested.

The Office Action rejects claim 16 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Claim 16 is canceled by this Amendment. However, the subject matter of 16 is incorporated into claim 17. The Office Action asserts that the specification provides insufficient written description of the same clock signal applied to the clock input of all subassemblies, directly. Specifically, the assertion is made that "directly" is not supported by the specification as positively recited in the pending claims. The Applicants do not concur with this assertion and voluntarily amend claim 17 for clarity. Accordingly, as the subject matter of claim 16 is incorporated into claim 17, reconsideration and withdrawal of the rejection of claim 16 (now claim 17) is respectfully requested.

Further, the Office Action objects to the drawings as not sufficiently showing every feature specified in the claims. Specifically, the Office Action asserts that the feature "same clock signal is applied to the clock input of all subassemblies, directly" is not sufficiently

shown. As claim 17 is amended for clarification, reconsideration and withdrawal of the objection to the drawings are respectfully requested.

The Office Action rejects claims 16-28 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,946,899 to Myono. Additionally, the Office Action rejects claim 29 under 35 U.S.C. §103(a) as being unpatentable over Myono in view of U.S. Patent Application Publication No. 2002/0014663 to Iwamatsu et al. (hereinafter "Iwamatsu"); and rejects claim 30 under 35 U.S.C. §103(a) as being unpatentable over Myono in view of one or more of U.S. Patent Application Publication No. 2004/0077151 to Bhattacharyya, U.S. Patent Application Publication No. 2004/0087084 to Hsieh, U.S. Patent Application Publication No. 2004/0094763 to Agnello et al. (hereinafter "Agnello"), and/or U.S. Patent Application Publication No. 2004/0018668 to Maszara. Applicants respectfully traverse these rejections.

The Office Action asserts that Myono teaches all of the features as positively recited in independent claim 16, which has been incorporated into independent pending claim 17, and, therefore, the following arguments are made accordingly.

First, the Office Action asserts that Myono teaches the functional elements being grouped in subassemblies each comprising a first and a second electrical supply terminal and a clock input, the subassemblies being connected in series by means of their supply terminals to the terminals of a voltage supply source, as positively recited in the pending claims. However, this assertion is incorrect. The Office Action, in asserting that Myono teaches the above feature, divides the circuit of Myono into a first subassembly comprising elements M3, M4, S3 and S4, and a second subassembly comprising elements M1, M2, S1 and S2, as shown in Fig. 1. The above-discussed configuration is shown with respect to the supply terminals of the individual elements comprising what is asserted to be each of the two subassemblies. Each transistor of Myono comprises two supply terminals (the source and the drain of each transistor) and each op-amp S comprises three supply terminals: two input

voltages and a ground. In what is asserted to be the first subassembly, supply terminal A of S4 and the drain of M4 are connected to Vout. In what is asserted to be the second subassembly, supply terminal B of S1 and the source of M1 are connected to Vdd. Further, supply terminal A of S2 of the second subassembly, is supplied by V3, where V3 is an output of the first subassembly. In the same way, supply terminal B of S3 of the first subassembly, is supplied by V1, where V1 is an output of the second subassembly.

In such a configuration, current flows not only from the source terminal Vdd to the second subassembly, from the second subassembly to the first subassembly, and from the second subassembly to ground, but also from the first subassembly back to the second subassembly. Thus, configuration of subassemblies as discussed above cannot reasonably be considered to teach, nor would it have suggested, a series connection by means of their supply terminals to the terminals of a voltage supply source, as positively recited in the pending claims.

Second, the Office Action asserts that Myono teaches a same current flowing through the different subassemblies, as positively recited in the pending claims. However, this assertion is incorrect. As discussed above, the Office Action divides the circuit of Myono into two parts which are asserted to correspond to subassemblies as positively recited in the pending claims. However, in such a division of the circuit, the current entering the second part is higher than the current entering the first part. The current entering the second part by the Vdd terminal is divided into two portions in the second part, where a first portion of the current flows through transistors M1 and M2, while a second portion flows to a supply terminal of element S1. As current flows through switching elements S, static and dynamic losses of current are due in each shift level circuit S. This loss of current must be accounted for, and therefore, the current entering the second part is higher than the current entering the

first part, as current must travel through the second part to the first part, and lose strength due to the current loss of the second part.

Additionally, as Myono itself treats the circuits of S1 and M1, S2 and M2, S3 and M3, and S4 and M4 each as separate subassemblies, as discussed at least in col. 5, lines 45-65. Therefore, the Office Action's assertions of subassemblies comprising elements M3, M4, S3 and S4, and elements M1, M2, S1 and S2 constitutes an improper application of hindsight reasoning. As the subassemblies of Myono take different configurations which cannot reasonably be considered to correspond to the configurations of subassemblies as positively recited in the pending claims, and further discussed in the Applicants' disclosure, Myono cannot reasonably be considered to anticipate the above-discussed features.

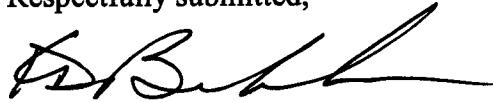
Iwamatsu, Bhattacharyya, Hsieh, Agnello and/or Maszara in any combination with Myono do not overcome the deficiencies as discussed above. For at least the above reasons, Myono cannot reasonably be considered to teach, nor would it have suggested, the combination of features as positively recited in pending independent claim 17. Additionally, claims 18-30 are also allowable at least for their dependence on allowable claim 17, as well as for the separately patentable subject matter that each of these claims recites.

Accordingly, reconsideration and withdrawal of the pending rejections of the Office Action under 35 U.S.C. §§112, 102 and 103 are respectfully requested.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 17-30 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachment:

Petition for Extension of Time

Date: February 25, 2008

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